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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

LEIGHTON TECHNOLOGIES LLC,

Plaintiff and Counterclaim Defendant,

v.

OBERTHUR CARD SYSTEMS, S.A.,

Defendant and Counterclaim Plaintiff.

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OBERTHUR CARD SYSTEMS, S.A.

MEMORANDUM IN SUPPORT OF MOTION FOR SUMMARY
JUDGMENT OF PATENT INVALIDITY

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Pursuant to the Court's Scheduling Order, dated July 16, 2004, as modified on September 8, 2004, Defendant Oberthur Card Systems, S.A. ("Oberthur") hereby submits its brief in support of its Motion for Summary Judgment of Patent Invalidity.

INTRODUCTION

Leighton Technologies LLC ("Leighton")¹ alleges that Oberthur infringes 53 claims ("Asserted Claims") in four United States Letters Patents, namely -- U.S. Pat. Nos. 5,817,207 ("the '207 patent") (Sharinn Ex. 1); 6,214,155 ("the '155 patent") (Sharinn Ex. 3); 6,036,099 ("the '099 patent") (Sharinn Ex. 2); and 6,514,367 ("the '367 patent") (Sharinn Ex. 4) (collectively the "Patents"). The Asserted Claims are strikingly similar from Patent to Patent.

During the prosecution of the '207, '155 and '099 patents Leighton argued, as this Court summarized in its Markman decision (Sharinn Ex. 5 at 13), that those patents "improved on the [prior art] by eliminating the need to specifically protect the electronic element during lamination" through adding to the claims the limitations of "the absence of a non-electronic carrier" and "directly". It was on the basis of this alleged inventiveness that these three patents issued.

The '367 patent was prosecuted last. As in the three earlier patents all of the '367 patent's claims recited an unprotected electronic element. However, during the prosecution of the '367 patent, the Examiner identified a theretofore uncited prior art Japanese patent that expressly taught laminating an unprotected chip and antenna. No longer could Leighton rely on the unprotected electronic element for patentability. Leighton therefore amended the claims in the '367 patent application to recite that the pressure during cooling was at least 10% greater

¹ "Leighton" is also used to refer to Keith Leighton, the inventor and an assignor to Leighton Technologies LLC of the Patents.

than the pressure during heating and argued that the prior art did not teach that limitation. The Examiner accepted this argument and allowed the '367 patent.

Leighton's amendment and argument was an admission that, absent the 10% limitation, there was no inventiveness to excluding protection for his electronic element and that at least the independent claims of the '207, '099, and '155 patents, whose allowance was based upon that feature, are invalid in light of the Japanese prior art.

A separate and independent ground exists for invalidating all the claims in the '367 patent. Prior art about which the Examiner was unaware teaches the greater than 10% limitation that Leighton added to achieve patentability of the '367 patent. Together with the other prior art this newly discovered prior art invalidates all the Asserted Claims, including the claims of the '367 patent.

Because there are no issues of material fact, each of the Asserted Claims is invalid, pursuant to 35 U.S.C. §102 or §103, in view of prior art that the United States Patent and Trademark Office ("USPTO") did not consider during prosecution of the respective claims. Thus, summary judgment that the Asserted Claims are invalid is appropriate as a matter of law.

I. FACTS

A. The Relevant Prosecution History of the Four Patents

1. The '207 Patent

On October 7, 1996, Leighton filed the "utility" application that matured into the subject '207 patent. Because that application relied on the previously filed '685 provisional application, its earliest effective filing date is October 17, 1995 for material disclosed in both applications.

In the first Patent Office action, the Examiner rejected all the claims then pending as obvious in view of U.S. Patent No. 4,450,024 ("the '024 prior art patent"). In his response, Leighton narrowed all his claims to recite an unprotected "electronic element in the absence of a

non-electronic carrier” positioned “directly” between “first and second plastic core sheets”. In its Markman decision, the Court held that by this language and the arguments made to the Examiner “Leighton relinquished any interpretation of ‘non-electronic carrier’ that includes any protection for the electronic element”. Sharinn Ex. 5, at 27.

2. The ‘099 Patent

Leighton filed the application that matured into the ‘099 patent (Exhibit 2) on August 18, 1997, approximately 10 months after filing the application that matured into the ‘207 patent. The ‘099 patent application is a continuation-in-part of the ‘207 patent application.

Whereas the ‘207 patent is directed to a hot lamination process for the manufacture of a contactless card, the ‘099 patent purports to relate to a so-called dual function card, which is a combination contact/contactless card. Despite the fact that the patents relate to different types of cards, the specifications of the ‘207 and the ‘099 patents share virtually the same disclosure. Moreover, except for the additional milling step after lamination necessary to form a dual interface card, the claims in the ‘099 patent and the ‘207 patent are virtually identical.

Given that similarity the prosecution of the ‘099 patent not surprisingly bears a strong resemblance to that of the ‘207 patent. Repeating his amendments and arguments in the ‘207 patent application, Leighton amended all his claims in the ‘099 patent to require that the “electronic element” have no protection. The Examiner thereupon allowed the claims.

3. The '155 Patent

Approximately two years after filing the application that matured into the '207 patent and approximately one year after filing the application that matured into the '099 patent, on September 22, 1998, Leighton filed the '155 patent application. Like the '207 patent, the '155 patent relates to contactless cards. The '155 patent differs from the '207 patent in that its claims do not recite a printing (or coating) step.

The prosecution of the '155 patent application followed the prosecution of the '207 patent application. As might be expected due to Leighton's success in the '207 patent application distinguishing over the prior art, Leighton *sua sponte* amended the claims after the '155 patent application was filed to recite "in the absence of a non-electronic carrier" and "directly". Because of this *sua sponte* amendment, the Examiner subsequently allowed the pending claims on June 5, 2000.

4. The '367 Patent

Leighton filed the application that matured into the '367 patent on August 5, 1999. By that time, Leighton had the benefit of his experience in the prosecution of the '207 and '099 patents. As a result, all the originally filed claims in the '367 patent contained the limitations "non-electronic carrier" and "directly" that Leighton had been required to add to the previous applications to achieve their allowance.

The '367 patent is a continuation of the '099 patent and therefore, except with respect to matters not here relevant, the specifications are identical. It is also a continuation-in-part of the '207 patent. Its claims differ from those in its parent, the '099 patent, principally in the absence of a printing (or coating) step.

The Examiner for the '367 patent discovered prior art that had not been found during the prosecution of Leighton's three previous Patents: Japanese Patent 6-176214 ("JP '214").

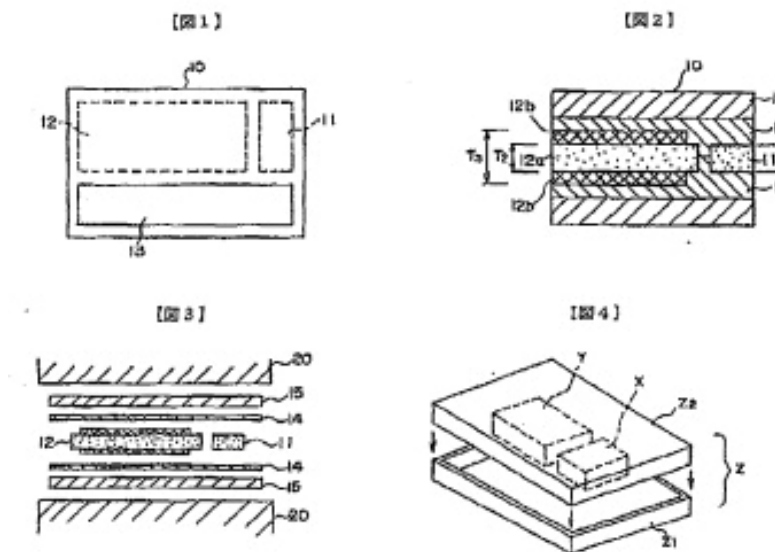
Sharinn Ex. 6 and Ex. 24. According to the Examiner, JP '214 taught laminating an unprotected chip and antenna:

Japanese Patent '214 taught a process for forming a smart card which included the steps of laminating with heat and pressure an assembly which included an IC chip 11 and a thin coil 12 (an antenna). **The IC chip 11 and antenna 12 were disposed unsupported between plastic films 14.** On either side of plastic films 14 were additional plastic films 15. **The assembly was disposed in a press and heat and pressure were applied in order to laminate the layers together to form a smart card.**

(Sharinn Ex. 7, OCS_C_045486) (emphasis added).

Examination of JP '214

confirms the Examiner's conclusion that JP '214 teaches the absence of non-electronic carrier, *i.e.*, it directly places an electronic element between plastic core sheets without any protection, as shown in Figs. 2 and 3 of JP '214, which are reproduced at the right.



JP '214 expressly states that the IC module “houses components such as an IC memory (not shown in the drawings) and a rectification circuit (not shown in the drawings)” Sharinn Ex. 6 and Ex. 24, ¶6. The thin IC module has a thickness of about 0.3 mm. *Id.* JP '214 also explains that there are two PVC resin plastic films 14, show in Fig. 3, that serve as “first and second plastic core sheets”. Sharinn Ex. 6 and Ex. 24, ¶7; Figs. 2 and 3. JP '214 explains that the thin IC module is positioned directly between PVC resin plastic films: “[the PVC resin plastic films are] interposed so that they sandwich the thin IC module and thin transmission/receiving coil [12]” Sharinn Ex. 6 and Ex. 24, ¶7.

Moreover, the IC module is encapsulated using heat and pressure to form the thin non-contact IC card:

‘[H]eating and compression are applied from both surfaces with hot plates 20 and 20, thereby fixing and integrating the elements.’

Sharinn Ex. 6 and Ex. 24, ¶¶7-9.

Since JP ‘214 teaches encapsulating the thin IC module directly between plastic core sheets in the absence of a non-electronic carrier, no longer could Leighton argue that laminating an unprotected “electronic element” added patentability. Leighton had to come up with a new strategy for patentability.

As filed, the independent claims of the ‘367 patent only required “cooling said core while applying a second pressure to said core”. Those claims said nothing about the relationship of the pressure used during heating and that used during cooling. To distinguish over the prior art, Leighton amended the ‘367 claims to add a limitation to all the ‘367 claims that required the pressure during the cooling to be “*at least 10% greater*” than the pressure during the heating. Leighton then argued to the USPTO that his inventive contribution to the prior art was cooling the core with at least 10 % greater pressure than the pressure used during heating. He represented that the prior art only taught maintaining the same pressure during cooling as was used during heating:

One skilled in the art would not be able to conclude that the (prior art) teaches increasing the pressure during the cooling process. ... There is no teaching or suggestion in [the prior art] to **increase** the pressure during cooling to **at least 10% greater than the pressure applied during the heating.**”

Sharinn Ex. at 7, OCS_C_045499 (emphasis in original).

Relying upon Leighton’s statement that none of the prior art of record taught or suggested the greater than 10% limitation, the Examiner allowed the claims stating:

None of the prior art of record taught or suggested that one skilled in the art at the time the invention was made to apply a second pressure upon the assembly **during cooling wherein the second pressure was at least 10% greater than the first pressure applied during assembly and heating.**

Sharinn Ex. 7 at OCS_C_045509 (emphasis added).

Thus, all the '367 patent claims, unlike the independent claims in the three preceding Patents (the '207, '155 and '099 patents), recite the "at least 10% greater" pressure limitation.

B. The Prior Art

1. Prior Art Of Record and Keith Leighton's Testimony

By adding the greater than 10% limitation to the claims of the '367 patent application in response to the Examiner's rejection that JP '214 taught laminating an unprotected electronic element, Leighton effectively conceded that JP '214, together with the other prior art of record, taught the lamination process as claimed in the '207, '099, and '155 patents. Oberthur accepts Leighton's concession and will not prolong this brief to discuss the prior art of record in the Patent Office in which both the Examiner and Leighton found each element of Leighton's alleged inventive lamination process except for the greater than 10% limitation. We leave to the detailed claim charts in Appendix A our explanation that the prior art taught all the elements and suggested the combination of those elements in the Asserted Claims.

Contrary to Leighton's representations to the USPTO, *supra* at 6, laminating plastic cards, including those with embedded elements, at a pressure during cooling that was at least 10% greater than the pressure during heating, was common practice long before the filing date of the earliest of the Patents. Smith ¶¶8-12. Indeed, Mr. Keith Leighton testified at his recent deposition that he had laminated plastic cards in the 1980's, or even earlier, with a pressure during cooling that was 10% or more higher than the pressure during heating. For example, Mr. Leighton testified:

Q I appreciate all of that, Mr. Leighton, but, unfortunately, I need an answer to this question, and I am going to ask it again, so bear with me, and let's try once more. And, I'm going to try to read back exactly what I asked, and maybe make it a little bit more literate.

Is it fair to say, Mr. Leighton, that before 1990 you made a plastic laminated card in which the pressure during the cooling was at least ten percent greater than the pressure during the heating.

MR. GUTKIN: Vague and ambiguous, Asked and answered. Calls for speculation.

THE WITNESS: Well, in order to move, I – I'm going to say yes to that question, but it does not pertain to making a radio frequency card.

Sharinn Ex. 8. Indeed, the reason for increased pressure during cooling was to insure a smooth surface on the laminated card, regardless of whether there was an embedded element present. In other testimony Mr. Leighton conceded that he had used a higher pressure long before he filed the applications for the Patents to insure that his laminated cards had a smooth surface:

Q: It's a slightly different question. I'm just trying to understand, Mr. Leighton, what [your former employer during 1970-1981] did, and – and I've gotten a number of different answers, and I'm just trying to pin down what the correct one is.

A: You keep asking if I ever increased pressure.

Q: Yes.

A: Yes, I've – I have increased pressure to facilitate the product that I was making.

Q: And the reason why you increased the pressure was to make a smooth surface; is that correct?

A: A smooth surface, and to prevent warping of the product.

Q: And you increased the pressure to, I think you said before, to insure there wouldn't be voids?

A: Correct.

Sharinn Ex. 9.

However, to simplify this motion and avoid the potential for the Court having to consider what we believe will be bogus issues of material fact we do not rely on Mr. Leighton's

admissions or a wealth of other available prior art. Rather, we rely on a “single” reference, the 1987 Oakwood Brochures, to show that Mr. Leighton’s purported invention was known for a long time. Indeed, the Oakwood brochures, in addition to teaching the greater than 10% limitation, teach all the elements of claim 20 of the ‘367 patent and claims 1, 6-7, and 14-16 of the ‘155 patent.

2. The Oakwood Brochures

Oakwood Design (“Oakwood”) and its founding Director Richard Smith engineered a series of lamination machines in 1984 known as the “Series 6 Laminators”. *See* Smith ¶10. In addition to manufacturing and selling the Series 6 laminators, Oakwood used the Series 6 machine to laminate contactless security access cards as early as 1984. *See* Smith ¶21. From the mid-1980’s through the late 1990’s Oakwood, at its location near London, England manufactured presses to laminate plastic cards.

As is customary for machine manufacturers Oakwood published various manuals and sales brochures detailing its products. Among these were two brochures that were meant to be read together; these two publications are a 1987 Oakwood sales brochure entitled “Lamination Presses for Bank Card & Printed Circuit Board Production (“1987 Oakwood Sales Brochure”) (Smith Ex. B) and a 1987 Oakwood Series 6 Laminators Sales Brochure (“1987 Oakwood Series 6 Brochure”) (Smith Ex. D) (collectively referred to as the “1987 Oakwood Brochures”). The 1987 Oakwood Brochures were published at the latest in early 1988 and thereafter were widely disseminated to the public.

The 1987 Oakwood Brochures not only promote Oakwood’s line of laminators, but also describe typical lamination cycles and products that the laminators can make. Also discussing lamination cycles and the structure of laminated cards is an instruction manual (Smith Ex. A) that accompanied the sale of the Series 6 laminators, one of Oakwood’s products. The

instruction manual attached to Mr. Smith's declaration was published in 1991, approximately 4 years before the effective filing date of the earliest of the Patents.

Rather than delve into the substance of these prior art publications here and duplicate text that can be found elsewhere, we refer to the Smith and Mosteller declarations, which authenticate and discuss these prior art publications, and our brief below, *infra* at 18. The 1987 Oakwood Brochures teach, among other things, using a pressure during cooling that is at least 10% greater than the pressure during heating. In fact, these brochures teach every element of claim 20 of the '367 patent and claims 1, 6-7, and 14-16 of the '155 patent.

C. Level of Skill in the Art

For our present purposes, as demonstrated by the attached Declaration of Barry Mosteller, persons who had ordinary skill in developing laminated plastic cards, including determining card structure and lamination cycle parameters, had a college degree, preferably one in material science, chemistry or mechanical engineering, and two years of practical experience or alternatively had four years of practical experience in laminated plastic card development. Mosteller ¶7.

II. SUMMARY JUDGMENT IS AN APPROPRIATE MEANS FOR DETERMINING WHETHER A PATENT CLAIM IS VALID

Summary judgment is appropriate when there is no genuine issue of material fact and the moving party is entitled to judgment as a matter of law. *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1576-77 (Fed. Cir. 1989). The Supreme Court has emphasized the importance of summary judgment as a tool by which District Courts can dispose of non-triable issues:

Summary judgment procedure is properly regarded not as a disfavored procedural shortcut, but rather as an integral part of the Federal Rules as a whole, which are designed 'to secure the just, speedy and inexpensive determination of every action.'

Celotex Corp. v. Catrett, 477 U.S. 317, 327 (1986).

There is no dispute whether this Court is empowered to invalidate any or all of the Patents' claims by summary judgment. It is well accepted that the validity of a patent claim, like any other issue, may be determined by summary judgment. *Avia Group Int'l, Inc. v. L.A. Gear Cal., Inc.*, 853 F.2d 1557, 1561 (Fed. Cir. 1988). Specifically, the Federal Circuit has consistently upheld district courts' summarily invalidating patent claims, pursuant to, *inter alia*, 35 U.S.C. § 102 as anticipated by the prior art. *See, e.g., Tellmac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1327 (Fed. Cir. 2001); *General Elec. v. Nintendo Co.*, 179 F.3d 1350, 1353 (Fed. Cir. 1999); *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1569 (Fed. Cir. 1988).

A. The Presumption of Validity is Merely Procedural

The first step in an invalidity analysis is the determination of the meaning and scope of the patent claims asserted. *See Rockwell Int'l Court v. United States*, 147 F.3d 1358, 1362 (Fed. Cir. 1998); *Markman v. Westview Instrs., Inc.*, 52 F.3d 967, 970-71, 976 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996). This Court, through its Markman decision, has completed the first step of the subject analysis.

In general, patents are presumed to be valid under 35 U.S.C. § 282. However, this statutory presumption is procedural rather than substantive. *Fromson v. Advance Offset Plate, Inc.*, 755 F.2d 1549, 1555 (Fed. Cir. 1985). More precisely, this presumption merely places the burden of persuasion initially on the party asserting invalidity.

A party, like Oberthur, seeking to prove invalidity must do so by clear and convincing evidence (*see Applied Medical Resources Corp. v. United States Surgical Corp.*, 147 F.3d 1374 1378 (Fed. Cir. 1998)), which need not be airtight, as the law only requires persuasion, not perfection. *Buildtex Inc. v. Kason Indus., Inc.*, 849 F.2d 1461, 1464 (Fed. Cir. 1988). Thus, the

USPTO's decision that certain subject matter is patentable "is never binding on a court".

Fromson, 755 F.2d at 1555.

B. Anticipation and Obviousness

1. Anticipation (35 U.S.C. § 102)

The patent statute codifies "anticipation" in 35 U.S.C. § 102 . In pertinent part 35 U.S.C. §§ 102 provides:

A person shall be entitled to a patent unless

(a) the invention was ... **patented or described in a printed publication** in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was **patented or described in a printed publication** in this or a foreign country ... more than one year prior to the date of the application for patent in the United States, or

(e) the invention was **described in ... a patent** granted on an application for patent by another filed in the United States before the invention by the applicant for patent

(Emphasis added). All of the prior art asserted by Oberthur in this brief qualifies as prior art under one of these three sections of the patent statute.

Anticipation requires that a single prior art reference teach all of the limitations of a claim. Three steps are used to determine if a patent is anticipated and therefore invalid.

Lindemann Maschinenfabrik v. American Hoist & Derrick Co., 730 F.2d 1452, 1458 (Fed. Cir. 1984).

First, the court must identify the limitations of a relevant claim. Second, it must properly construe the limitations of the relevant claim in light of the specification and the prosecution history of the patent. *Id.* And third, the court must determine, for purposes of finding invalidity

pursuant 35 U.S.C. §102 , whether each of the properly construed claim limitations are either expressly or inherently found in a single prior art reference.

Notwithstanding, courts are cautioned that, while anticipation requires that a single prior art reference teach all of the limitations of a claim, there need not be word-for-word identity between the prior art reference and the claim limitations. *Standard Havens Prods. v. Gencor Indus.*, 953 F.2d 1360, 1369 (Fed. Cir. 1992). In fact, a prior art reference need not expressly disclose all of the limitations of the claim, so long as those limitations are inherently disclosed--a question of pure law. *Id.* Anticipation by inherency requires that one of ordinary skill in the relevant art would have recognized that the missing descriptive matter is necessarily present in the thing described in the reference. *Continental Can Co. v. Monsanto, Inc.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991).

Material that is not explicitly or inherently contained in a single prior art document may still be considered for purposes of anticipation if that material is incorporated by reference into the document. *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). Furthermore, “A reference anticipates a claim if it discloses the claimed invention ‘such that a skilled artisan could take its teachings *in combination with his own knowledge of the particular art and be in possession of the invention*’ *In re Graves*, 69 F.3d 1147, 1152 (Fed. Cir. 1995), cert. denied, 517 U.S. 1124 (1996), *quoting In re Grice*, 301 F. 2d 929, 936, 133 U.S.P.Q. 365, 372 (CCPA 1962) (emphasis in original).

2. Obviousness (35 U.S.C. § 103)

Non-obviousness is another fundamental requirement of patentability. Much like the test for novelty, the test for obviousness looks to the prior art to determine whether an invention is patentable. The test for obviousness, however, is not limited to a single prior art reference.

Instead, multiple prior art references can be combined to teach the limitations of a claim, thereby rendering the claim invalid.

The Patent Act defines a claim as being obvious “if the difference between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.” 35 U.S.C. § 103(a).

35 U.S.C. § 103(a) sets forth the statutory obviousness criteria, and provides in relevant part:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

The Supreme Court outlined three factual predicates that a court must consider in an obviousness analysis. *Graham v. John Deere*, 383 U.S. 1 (1966). First, the scope and content of the prior art must be determined. *Graham*, 383 U.S. at 17. Second, the differences between the prior art and the asserted claims must be determined. *Id.* Third, the level of ordinary skill in the pertinent art must be determined. *Id.* Although each of these predicates is a question of fact, the ultimate finding of obviousness is a question of law. *Advanced Display Sys., Inc.*, 212 F.3d at 1284. Accordingly, a dispute about the legal conclusion of obviousness will not preclude granting summary judgment if there is no genuine dispute regarding the underlying factual predicates. *Newell Cos., Inc. v. Kenney Mfg. Co.*, 864 F.2d 757, 763 (Fed. Cir. 1988).

When considering factual predicates of obviousness, there is a danger of applying “hindsight” to find a claim to be obvious. *See Minton v. Nat’l Ass’n Sec. Dealers, Inc.*, 226 F.Supp.2d 845 (E.D. Tex. 2002) (“Because a court has the benefit of seeing the elements already

combined in the patent claims when determining whether it would have been obvious to combine the elements from the prior art references, an inherent temptation exists to ‘Monday-morning quarterback’”). To avoid the improper use of hindsight, courts require a showing of some motivation to combine the relevant prior art references to teach all of the limitations of the claim-at-issue. *See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.*, 229 F.3d 1120 (Fed. Cir. 2000). Thus, before a conclusion of obviousness is to be made based on combining prior art references, a reason, suggestion, or motivation to lead an inventor to combine those references must be established. *See ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577 (Fed. Cir. 1984); *see also Pro-Mold and Tool Co., Inc. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996).

The suggestion may come expressly from the references themselves. *See, e.g., In re Sernaker*, 702 F.2d 989, 994 (Fed. Cir. 1983). It may come from knowledge of those skilled in the art that certain references, or disclosures in the references, are known to be of special interest or importance in the particular field. *Cf. Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 297 n. 24 (Fed. Cir. 1985) (stating that the knowledge of one skilled in the art may provide the “teaching, suggestion, or inference” to combine references). Furthermore, the suggestion also may come from the nature of a problem to be solved, leading inventors to look to references relating to possible solutions to that problem. *See, e.g., In re Rinehart*, 531 F.2d 1048, 1054 (CCPA 1976) (considering the problem to be solved in a determination of obviousness).

The state of the art must be considered. In making an obviousness determination, the teachings of the references, their relatedness to the field of the applicant’s endeavor, and the knowledge of persons of ordinary skill in the field of the invention, are all relevant

considerations. *See In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992); *In re Gorman*, 933 F.2d 982, 986-87 (Fed. Cir. 1991); *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991).

Although obviousness is a factual issue and requires evaluation from the point of view of the person of ordinary skill in the art, the court need not have expert testimony to render a summary judgment of invalidity. “When the district court has before it all of the relevant prior art, and its subject matter is easily discernible from the drawings and written descriptions, expert testimony regarding the scope and content of the prior art is not necessary.” *Ryko Manufacturing Co. v. Nu-Star*, 18 U.S.P.Q. 2D 1047, 1990 U.S. Dist. LEXIS 18735 at 5 (D.MN 1990), *aff’d*, 950 F.2d 714 (Fed. Cir. 1991); *see, Sandt Technology, Ltd. V. Resco Metal and Plastics Corp.*, 264 F.3d 1344, 1355 (Fed. Cir. 2001).

III. THE PRIOR ART INVALIDATES THE ASSERTED CLAIMS

A. All the Asserted Claims of the ‘207, ‘155 and ‘099 Patents are Invalid

Leighton never claimed to have invented milling a card (recited in claim 1 of the ‘099 and ‘367 patents), applying an overlamine film (recited in claim 1 of the ‘207 patent and ‘155 patent) or printing (recited in claims 1 and 16 of the ‘207 patent and claim 1 of the ‘099 patent). Rather, as described above in the prosecution history, Leighton’s first claim of novelty over the prior art was that his process for hot laminating plastic cards eliminated “the need to specifically protect the electronic element during lamination”. The Court in its Markman decision summarized Leighton’s invention as follows:

Thus, as noted above, the essence of the Patents is the lack of any ‘non-electronic carrier.’

Sharinn Ex. 5 at 25.

Unfortunately for Leighton, during prosecution of the ‘367 patent, an Examiner other than the one who had reviewed Leighton’s previous three patents found JP ‘214. That patent expressly teaches laminating an unprotected chip and antenna. Leighton recognized that the

“non-electronic” carrier limitation no longer provided the defining characteristic over the prior art. Accordingly, while prosecuting the ‘367 patent application Leighton adopted a new strategy—the “greater than 10%” limitation.

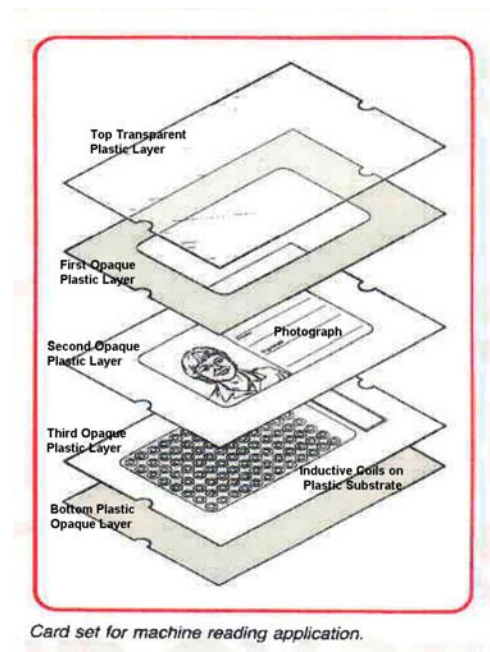
Notably, none of the independent claims in Leighton’s three preceding patents, the ‘207 patent, the ‘155 patent and the ‘099 patent, include the “at least 10% greater” pressure limitation. In adding this greater than 10% limitation to all the claims in the ‘367 patent, Leighton conceded the lack of novelty of all independent claims in the other three Patents. That is, those claims’ only novelty laid in the “absence of a non-electronic carrier”, a feature that Leighton admitted the newly cited JP ‘214 taught and that his claims were rendered unpatentable under 35 U.S.C. § 103 in view of the prior art.

For sake of brevity Oberthur does not provide a detailed narrative proving the invalidity of all the Asserted Claims in the ‘207, ‘099 and ‘155 patents. However, the claim charts in Appendix A apply the relevant prior art against those claims, element by element. Except for the 1987 Oakwood Brochures, which are used for teaching greater pressure during cooling with respect to those dependant claims that recite that limitation, and except for the elements (*e.g.*, printing, matte plates), which the Examiner felt were so clearly within the knowledge of those skilled in the art that he did not cite any art, the prior art upon which the claim chart relies is that which the Examiners of the respective Patents used. These features (printing, milling, etc.), which are outside the claimed novelty of Leighton’s alleged invention, “had no effect on the ‘novelty and concept of the invention:’” the hot lamination cycle. *Sandt Technology, Ltd. V. Resco Metal and Plastics Corp.*, 264 F.3d 1344, 1355 (Fed. Cir. 2001), *citing* unreported decision of J. McMahon.

B. Claim 20 of the '367 Patent is Invalid

Every limitation in claim 20 of the '367 patent is unequivocally taught in two interrelated and widely distributed 1987 Oakwood Brochures. The 1987 Oakwood Sales Brochure incorporates by reference the contents of the 1987 Oakwood Series 6 Brochure. These documents, taken together, teach, among other things, using a pressure during cooling that is at least 10% greater than the pressure during heating. Indeed, these brochures teach every element of claim 20 of the '367 patent. Thus, claim 20 is invalid as being anticipated under 35 U.S.C. §102(b).

The 1987 Oakwood Series 6 Brochure describes the Oakwood Series 6 laminator and illustrates an exploded view of a card set for machine reading applications that can be manufactured using that laminator. Smith ¶24; Mosteller ¶9. The card set illustration is duplicated on the right with added labels for purposes of this motion. The card set as shown comprises 5 plastic layers: a top transparent plastic layer;



a first opaque plastic layer having a cutout; a second opaque plastic layer upon which an actual photograph sits; a third opaque plastic layer having an inserted plastic substrate carrying inductive codings (coils); and a bottom opaque plastic layer. Smith ¶¶24-25; Mosteller ¶¶9-14.

In order to create a flat surface across the card the first opaque plastic layer has a thickness approximately the same as the thickness of the photograph and together effectively form one layer when the card set is compressed. Smith ¶25; Mosteller ¶15. Similarly, in order to minimize voids that the soft plastic must fill during the lamination process the third opaque

plastic layer surrounding the substrate has a thickness somewhere between the thickness of the substrate and the substrate plus the thickness of the coils. Smith ¶25; Mosteller ¶15.

Accordingly, the top of the coils extend slightly above the top level of the third opaque plastic layer surrounding the substrate. Smith ¶25; Mosteller ¶15. In sum, when assembled and laminated the card is substantially flat across its surface. Smith ¶26; Mosteller ¶15.

The 1987 Oakwood Series 6 Brochure teaches that the second to last layer includes, as illustrated, inductive coils. Smith Ex. D at 4; Mosteller ¶16. It further teaches that these coils become part of an electrical circuit that permits the coils to be machine readable:

By **inserting specialist coding . . . into the core structure** the [Oakwood card] becomes a new tool . . . for many **machine reading** applications . . . includ[ing] varying types of **inductive codings**.

Mosteller ¶16 (emphasis added).

Moreover, that brochure even teaches that microchips can be laminated into the core: “Oakwood technicians are skilled in the use of PVC . . . and have **packaged the most sophisticated micro chips within the core structure of a card.**” Mosteller ¶13 (emphasis added). Thus, a review of this brochure compels a finding that it discloses that “electronic element[s]”, inductive coils or microchips, among others, can be embedded into the “core” of a laminated plastic card.

As illustrated in the 1987 Oakwood Series 6 Brochure, the inductive coils, or microchips, (“electronic element[s]”) are between the second opaque plastic layer and the plastic substrate (“first and second plastic core sheets”, *i.e.*, “sheets of plastic between which the electronic element is placed”). Accordingly, as required by claim 20 of the ‘367 patent, the card’s

inductive coils are in immediate physical contact with (“directly”² between) and enclosed by (“encapsulated by”³) the second opaque plastic layer and plastic substrate when the card layers shown in the illustration come together. As can also be seen the inductive codings are not protected by any device from damage during lamination and therefore are “in the absence of a non-electronic carrier”.⁴ Furthermore, a “core” is thereby formed by the second opaque plastic layer, the inductive coils and the plastic substrate.

With reference to claim 20’s remaining elements, the 1987 Oakwood Series 6 Brochure teaches that the card set, including the “core”, is laminated by the Series 6 laminator using a heat and pressure cycle. More precisely:

The card sets to be laminated are inserted . . . into the machine on the laminating tray. . . . [h]eat and pressure are applied for the initial heating cycle and varied as required during the hold and cooling period.

Smith Ex. D at 3.

As mentioned, in addition to publishing Oakwood’s Series 6 Brochure Oakwood published a 1987 Oakwood Sales Brochure. The 1987 Oakwood Sales Brochure specifically references the 1987 Oakwood Series 6 Brochure: “an additional brochure is available for the series 6 range”. Smith Ex. B at 8. It thus incorporates by reference the content of the 1987 Series 6 Brochure and ties the two brochures together as one.

² The Court in its Markman decision defined “directly” to mean “in immediate physical contact”. Sharinn Ex. 5 at 27.

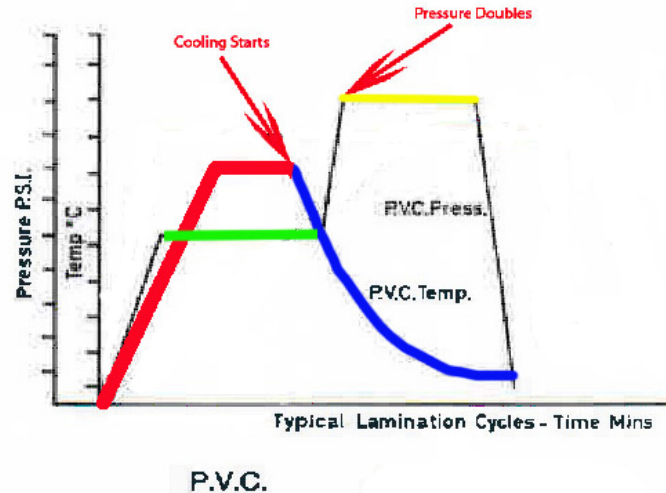
³ The Court in its Markman decision defined the term “encapsulated by” to mean “enclosed by”. Sharinn Ex. 5 at 29.

⁴ The Court in its Markman decision defined “non-electronic carrier” to mean “A device that holds an electronic element to protect it from physical damage during lamination, where the device is not part of a circuit that utilizes a semiconductor device.” Sharinn Ex. 5 at 25.

Page 6 of the 1987 Oakwood Sales

Brochure depicts the details of a typical lamination cycle of the Series 6 laminator for both plastic (PVC) laminated cards and printed circuit boards (PCB). Smith ¶19.

The parts of that Oakwood diagram relevant to plastic laminated cards are reproduced in the right margin. The



legend on the diagram teaches that the pressure and temperature diagram illustrates a “Typical Lamination Cycle[]” for PVC. Smith Ex. B at 6. The pressure and temperature curves for PVC are colored in the diagram for purposes of explaining how the respective curves describe and illustrate the heating and pressure cycle recited in claim 20 of the ‘367 patent.

The diagram illustrates a heating cycle and a subsequent cooling cycle. Smith Ex. B at 6. During the heating cycle of the card set, including the second opaque plastic layer, the inductive coils and the substrate carrying the inductive coils (collectively the “core”), the card set is heated for a “first period of time” (red line). *See Sharinn Ex. 4, claim 20(c)(i)*. The diagram also illustrates applying a “first pressure” for a “second period of time” (green line). *See Sharinn Ex. 4, Claim 20(c)(ii)*. By applying this “first pressure” for a “second period of time” during the heating of the “core”, the 1987 Oakwood Sales Brochure shows that the inductive coils (“electronic element”) are enclosed (“encapsulated”) by the “core” when the second opaque plastic layer and the plastic substrate shown beneath the inductive coils (“first and second plastic core sheets”) are softened by the application of the heat and pressure. *See Sharinn Ex. 4, Claim 20(c)(ii)*.

During the cooling stage, the “core” is cooled (blue line) while applying a “second pressure” (yellow line). *See* Sharinn Ex. 4, Claim 20(c)(iii). Claim 20 recites that the “second pressure” is “at least 10% greater than the first pressure”. *Id.* The diagram in the 1987 Oakwood Sales Brochure clearly illustrates the application of a much greater pressure during the cooling than during the heating. Indeed, the diagram illustrates a pressure during the cooling (yellow line) that is approximately twice as great as the pressure during the heating (green line). Smith ¶19.

Neither the Patent Examiner responsible for the ‘367 patent nor the Patent Examiners on the three earlier Patents were aware of either of the Oakwood Brochures. Since each and every limitation of claim 20 is described and illustrated in the 1987 Oakwood Brochures, claim 20 of the ‘367 patent must be found invalid as anticipated under 35 U.S.C. §102(b). Indeed, for the same reasons explained above, the 1987 Oakwood Brochures teach each and every element of claims 1, 6-7, and 14-16 of the ‘155 patent.

Even if the Court determines that it must view the two 1987 Oakwood Brochures as separate references, their combination is obvious pursuant to 35 U.S.C. §103. Not only is there the reference in the 1987 Oakwood Sales Brochure to the 1987 Oakwood Series 6 Brochure, but also the legend of the pressure/temperature diagram in the 1987 Oakwood Sales Brochure, which states “Typical Lamination Cycle[] ... P.V.C. ... Cycle Curves”, would motivate a person of ordinary skill in the art to use the illustrated cycle to laminate PVC cards, including the PVC card set illustrated in the 1987 Oakwood Series 6 Brochure. Accordingly claim 20 of the ‘367 patent is invalid as obvious in view of the prior art under 35 U.S.C. §103. Of course, this reasoning applies equally to claims 1, 6-7, and 14-16 of the ‘155 patent.

C. All the Asserted Claims of the ‘367 Patent Are Invalid

Until Leighton added the greater than 10% limitation the Examiner of the ‘367 patent application rejected all the claims of that application and did not permit that application to issue as a patent. Since the claims prior to the addition of the greater than 10% limitation were not patentable and since the greater than 10% limitation did not add patentability for the reasons shown in the immediately preceding point, all the Asserted Claims of the ‘367 patent are invalid in view of the prior art under either 35 U.S.C. § 102 or 35 U.S.C. § 103. We demonstrate this claim by claim, element by element, in the claim charts of Appendix A.

To the extent that any further motivation need be shown to justify combining the lamination cycle disclosed in the 1987 Oakwood Sales Brochure with the other prior art, among other places it is found in the legend of the pressure/temperature diagram. That legend states “Typical Lamination Cycle[] ... P.V.C. ... Cycle Curves” and would motivate a person of ordinary skill in the art to use the illustrated cycle to laminate plastic (PVC) cards.

IV. CONCLUSION

Oberthur respectfully requests that the Court find that each of the Asserted Claims are invalid pursuant to 35 U.S.C. § 102 or § 103 in view of the prior art.

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/S/

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